Sexual Potency Before and After Radical Prostatectomy

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A triad of factors can favorably influence the maintenance of sexual potency after radical prostatectomy: the surgical avoidance of cavernous neurovascular bundles, the preoperative interest of the surgeon in broaching the subject with the patient and the continued encouragement given the patient by his attending physician as to probable preservation of sexual competency following the surgical procedure.

(Finkle AL, Williams RD: Sexual potency before and after radical prostatectomy. West J Med 1985 Oct; 143:474-475)

Recent reports of preserved sexual potency after radical prostatectomy[1,2] contrast substantially with previous conclusions as to invariable loss.[3,4] To establish a baseline for postoperative sexual function, we obtained a sexual history of each patient before the operation. Herein we report our findings regarding preoperative and postoperative sexual function in 41 patients who underwent pelvic node dissection and radical prostatectomy for prostatic adenocarcinoma between October 1979 and August 1984. Our purpose is twofold: to encourage the development of protocols for evaluation and to stimulate publication of the data thus acquired to improve knowledge of postprostatectomy sexual potency.

Patients and Methods

From October 1979 through July 1984, 41 radical prostatectomies were done by one of us (R.D.W.) or by urology residents under his supervision at the University of California, San Francisco, School of Medicine or the San Francisco VA Medical Center. In all patients, pelvic lymph node dissection was carried out before the prostatic operation. If no malignancy was found in a frozen section study, a radical retropubic prostatectomy was done immediately (38 patients). In the three other patients, microscopic examination of the frozen section indicated a high probability of nodal metastatic spread, and a radical perineal prostatectomy was done.

Before the 1983 report by Walsh, Lepor and Eggleston[2] of their surgical technique for preserving certain neurovascular bundles (and, thus, sexual potency), our efforts to ablate the adenocarcinoma were undertaken without clear regard for preserving potency. Subsequently, in all instances we used a Walsh retropubic surgical approach designed to spare potency as well as to excise the malignant tumor.

Our evaluation of the patients' postoperative sexual potency was initially attempted by a mailed questionnaire (1979 to 1981). In view of the considerable interest of the respondents, many of whom requested an interview, we elected to arrange a personal meeting or at least a telephone contact. In this retrospective study (1979 to 1981), the patient was interviewed alone and the findings were compared with those obtained from husband and wife together. No appreciable differences were noted from the solo or two-partner interviews, although the latter would probably tend to produce more accurate reports.

From 1979 to 1981, penile erection was accepted as evidence of intact "potency," as had been necessary in the study of Finkle and Taylor,[1] who were obliged to review hospital records in their retrospective study of sexual potency after radical prostatectomy. Only two of our patients reported erections, but they were unable to engage in sexual intercourse. Therefore, we abandoned this definition.

From 1981 to 1984, in the prospective phase of this study, we encountered more men who reported penile erection and ability to carry out intercourse. Therefore, we upgraded our definition to mandate coital competence as evidence of preserved sexual potency.[5] This definition proved appropriate in light of the vastly increased incidence of sexual potency in our patients after we applied the Walsh method for radical retropubic prostatectomy.

Results

Of our 26 patients who underwent radical prostatectomy between October 1979 and April 1983, one was impotent preoperatively and remained so postoperatively; of the 25 who were potent preoperatively, only 2 (8%) professed "partial erections" after their operations, and 21 became impo-

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tent. (Two men died of nonmalignant causes within three months of the operation, not having attempted intercourse.)

In contrast, among the 15 patients who underwent radical prostatectomy after April 1983 in whom a specific attempt was made to preserve the periprostatic neurovascular bundles,[2] 6 of 10 (60%) who were potent preoperatively remained so postoperatively. Five patients who were impotent preoperatively remained so postoperatively.

Discussion

When men are advised of prostatic cancer, most are primarily concerned with optimal treatment of the cancer—a consideration that understandably supersedes the threat of sexual impotence. For many years, we had avoided intensive preoperative questioning of patients about their sexual status on the premise that these queries alarmed patients and made them worry about loss of potency, perhaps initiating a self-fulfilling prophecy.[6] For the same reason, no preoperative electronic monitoring tests, such as those devised by Scott and co-workers[7] or cited by Morgan and Pryor,[8] were done. It proved noteworthy to the interviewer (R.D.W.), however, that the patients evaluated for the present report were very appreciative of the time and consideration devoted by the urologic surgeon to the possible effect of the operation on sexual function and the potential preservation of sexual potency postoperatively. We recommend, therefore, that questioning as to sexual potency be introduced casually during the evaluation of marital status in the customary history elicited by clinicians.

For five decades after Young introduced radical prostatectomy in 1905,[9] it was generally assumed that postoperative sexual impotence was inevitable. The validity of this assumption was questioned by Finkle and Saunders[10] in 1960 and again by Finkle and colleagues[11] in 1975. More recently, these authors[12] noted that urologic counseling effected prompt reinstatement of sexual potency in 75% of 388 private patients, including some men who had had a radical prostatectomy.

The 1983 report by Walsh and associates[2] of their surgical technique for preserving sexual potency during radical prostatectomy has given renewed impetus to the treatment of prostatic cancer by radical surgical procedures. Their method of preserving the periprostatic cavernous neurovascular bundles in retropubic prostatectomy doubtlessly constitutes the fundamental basis for preservation of potency. As early as 1975, however, the preservation of sexual potency in response to urologic counseling alone was reported in six of ten private patients who had undergone radical perineal prostatectomy by one surgeon over a period of many years.[11] At that time, eight years before publication of the Walsh technique, it was obviously impossible knowingly to avoid operative damage to cavernous neurovascular bundles. Thus, if injury to these vital blood and nerve conduits had been avoided, it was pure happenstance; therefore, preoperative and postoperative encouragement by the urologist before 1975[11] and 1983[2] constituted the presumptive factor in reinstatement of sexual potency.

From these various considerations it appears that, in addition to the verifiable benefits of the Walsh technique of radical prostatectomy, preoperative and postoperative evaluations of sexual function by a tactful interview are valuable. Such inquiry by a urologist is appreciated by patients and undoubtedly represents positive reinforcement of ability to resume sexual intercourse after the operation—generally within several months to one year.

All surgeons who propose operations that may threaten sexual function should evaluate potency. One of us (R.D.W.) recently encountered two patients who had undergone radical cystectomy (including urethrectomy in one) who remained potent. These results are probably explained entirely by the intentional preservation of cavernous neurovascular bundles during the operation.

Should a patient doubt the successful resumption of coitus, especially a patient undergoing radical prostatectomy, the surgeon should consider the various factors cited in our experience: preoperative evaluation of sexual competence, intraoperative sparing of periprostatic neurovascular bundles and ongoing reassurance by the surgeon.

REFERENCES

1. Finkle AL, Taylor SP: Sexual potency after radical prostatectomy. J Urol 1981; 125:350-352

2. Walsh PC, Lepor H, Eggleston JC: Radical prostatectomy with preservation of sexual function: Anatomical and pathological considerations. Prostate 1983; 4:473-485

3. Weyrauch HM: Surgery of the Prostate. Philadelphia, WB Saunders, 1959, pp 119, 123, 177

4. Jewett HJ: The present status of radical prostatectomy for stages A and B prostatic cancer. Urol Clin North Am 1975; 2:105-124

5. Finkle AL, Moyers TG: Sexual potency in aging males: IV. Status of private patients before and after prostatectomy. J Urol 1960; 84:152-157

6. Finkle AL, Prian DV: Sexual potency in elderly men before and after prostatectomy. JAMA 1966; 196:139-143

7. Scott FB, Byrd GJ, Karacan I, et al: Erectile impotence treated with an implantable, inflatable prosthesis—Five years of clinical experience. JAMA 1979; 241:2609-2612

8. Morgan RJ, Pryor JP: The investigation of organic impotence. Br J Urol 1980; 52:571-574

9. Young HH: The early diagnosis and radical cure of carcinoma of the prostate. Johns Hopkins Hosp Bull 1905; 16:315-321

10. Finkle AL, Saunders JBdeCM: Sexual potency in aging males—III. Technic of avoiding nerve injury in perineal prostatic operations. Am J Surg 1960; 99:23-26

11. Finkle JE, Finkle PS, Finkle AL: Encouraging preservation of sexual function postprostatectomy. Urology 1975; 6:697-702

12. Finkle AL, Finkle CE: Sexual impotency: Counseling of 388 private patients by urologist from 1954 to 1982. Urology 1984; 23:25-30